

Biliteracy, Spelling, and Writing: A Case Study

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ABSTRACT

The overall purpose of this case study is to examine biliteracy and its effects on a young child's orthographic and writing growth. The analysis of the kindergartener's spelling development and compositional growth in reference to both language systems indicates that biliteracy had a positive effect on the student's acquisition of English orthography and fostered a well-balanced development of composition skills in both languages. The article provides suggestions that promote biliteracy in both the classroom and home settings and encourages teachers to engage in instructional practices that value linguistic diversity. Online resources for classroom practice are also included.

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Introduction

Bilingual children comprise one of the fastest growing populations in the increasingly diverse world of public education (Federal Interagency Forum on Child and Family Statistics, 2008). The number of bilingual students nearly doubled in the last 30 years and amounted to 21% of all school-age children in 2009 (Planty, et al., 2009). Research suggests that learning to read may come easier to fully bilingual children due to enhanced linguistic ability (i.e., word and

syntactic awareness) and skill transfer between languages, particularly for languages using similar writing systems (Bialystok, McBride-Chang, & Luk, 2005).

Recently, the New York State Bilingual Common Core Initiative (2014-2015) put a renewed emphasis on the value of second language learners' linguistic knowledge and on the active use of students' home languages to meet the Common Core Language Standards. The New Language Progressions (2014-2015) provides a framework for teachers to deliver the content at five different levels of language proficiency in response to students' linguistic needs. In many cases, students are encouraged to choose between responding to the linguistic demands of the academic tasks in their home language or in the new language (i.e., English). However, many approaches suggested in the Progressions (e.g., use of cognates, phonetic similarities, responses in home language) prove to be problematic for teachers of the exponentially growing multilingual student population of New York State. Since students often come with home languages outside the Indo-European language family, there may be multiple languages represented in the same classroom; therefore, students cannot be accommodated in their first language due to lack of teacher knowledge of the various languages. Nevertheless, the question of what constitutes effective instructional approaches directed toward the multi-lingual student population is as topical as ever. The purpose of this article is to describe the case of a female biliterate learner who began exploring English orthography upon entering kindergarten in the United States and argue that literacy instruction should actively engage the knowledge that biliterate students bring to school, as this incoming knowledge can support students' literacy growth in their new language.

Background

For clarity purposes, it is important to define the terms bilingualism and biliteracy. Biliteracy or dual literacy refers to the capacity of an individual to read and write in two languages, whereas bilingualism occurs when an individual has high oral proficiency in both languages. Although the literacy development of bilingual students in their new language is well documented in research literature, a relatively small number of studies explored the biliteracy of young children in the United States (Bauer, 2000; Bauer, 2009; Hu & Commeyras, 2008).

Biliteracy has been associated with increased literacy achievement and greater cognitive flexibility, both of which promote English schooling achievement (Proctor, 2010). As such, students who develop strong reading comprehension strategies and are motivated to read in a heritage language demonstrate the same skills and attitudes to reading in English (Jimenez, Garcia, & Pearson, 1995; 1996). Biliterate students also have higher scores on cognitive ability tests such as concept-formation tasks (Hamers & Blanc, 2000). Interestingly, studies in Spanish-English bilingualism show that biliterate Spanish speaking students have significantly higher academic achievement than the students with only oral proficiency in Spanish or little or no skills in Spanish (Haneda, 2009). In all language groups, the academic performance of children with dual literacy in reading, writing and spelling is the same or better than that of their monolingual peers (Cummins, 2000).

In the case of emergent writers, evidence suggests that students develop their spelling and writing skills without confusion between languages (Edelsky & Jilbert, 1985; Gort, 2006). Moreover, a facilitative effect occurs between alphabetic languages in early writing skills, such as, letter sound knowledge, use of upper and lower-case letters, adding a period at the end of a sentence and spacing between words (Gort, 2006; Jared et al, 2011). Spelling skills in one language allow cross-linguistic growth of phonological awareness, morphological analysis, and

knowledge of graphemic conventions (Francisco, et al, 2006). In the case of logographic (e.g., Korean) and alphabetic (e.g., English) biliteracy, essential writing concepts are used cross-linguistically, such as understanding that writing is different from drawing, writing carries a message to a recipient, different types of text are used for different purposes and that knowledge stemming from both the heritage language and L2 sources can be used in writing to build rich content (Shaguoury, 2009; Priven, 2010; Bauer & Arazi, 2011).

Unfortunately, little or no attention is given to the development and retention of biliteracy, with the exception of some successful Spanish/English bilingual programs (Serna, 2009; Lindholm-Leary, 2014). In this article we describe the case of a female biliterate learner who explored English orthography upon entering kindergarten in the United States. With this examination we attempt to address the following questions:

1. How does literacy knowledge in one language support orthographic knowledge in another language?
2. How does literacy knowledge in one language support writing development in another language?

Further, we discuss implications and recommendations as these relate to classroom instruction and home-to-school connections.

Participant and Context

At the time of the study, Vikka was a five-year old, Russian-English bilingual student who attended full-time public kindergarten. She arrived in the United States a month prior to her enrollment in kindergarten after a two-and-a-half year stay in Russia. Her father is a monolingual English speaker and her mother speaks English and Russian fluently. Vikka exhibited a native oral proficiency in both languages due to her mother's use of Russian in oral communication with Vikka and her father's use of English. Vikka, during her 2-year stay in Russia attended a pre-school program where she acquired foundational literacy skills in the Russian language. Specifically, she learned letter sound relationships, letter formation, the spelling of monosyllabic words and a limited number of high frequency phonetically regular and irregular multisyllabic words. She also learned that writing served communication purposes and began to create simple texts. When she entered Kindergarten in the U.S., she enjoyed reading and discussing Russian books with her mother and communicated via writing with her Russian relatives in the absence of structured Russian literacy instruction at home or through a heritage community. Particularly, Vikka independently read kindergarten and first grade level texts in Russian several times a week. She actively participated in daily read-alouds of fiction and non-fiction texts. Vikka also used her knowledge of Russian written expression to exchange notes with her mother and write cards and emails to her grandparents in Russia. Overall, the student's disposition towards reading and writing was positive.

Upon entering the U.S., Vikka attended a full-day kindergarten program in a Title 1 school. The school did not participate in the Common Core State Standards initiative at this time. The class consisted of 26 children, 3 of them linguistically diverse, including the participating student. The classroom was staffed with a teacher and a full-time special education paraprofessional. The teacher encouraged drawing, scribbling and early writing during free-writing activities and structured writing experiences with the use of prompts, sentence starters and simple organizational frames. A print rich environment that facilitated self-sponsored literacy learning was present in the room: students had the English alphabet on their desks, word wall words were added daily and organized in alphabetical order, and the classroom library was

stocked with leveled books of various genres, as well as with wide array of wordless picture books. The school did not provide a program in bilingualism or biliteracy.

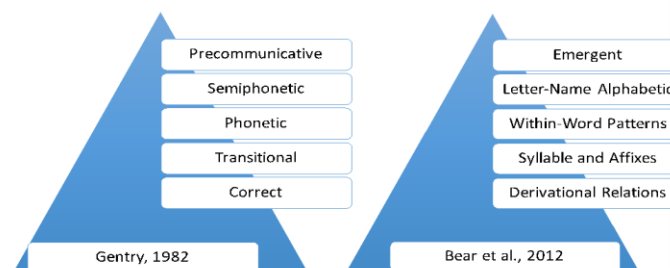
When Vikka entered Kindergarten, there was a concern on her family's side about her ability to cope with English orthography, since there are considerable differences between English and Russian orthographic systems. Russian orthography is relatively regular, as it contains many patterns that follow a direct phoneme-grapheme correspondence (Kerek & Niemi, 2009). The English orthographic system belongs to a family of deeper orthographies. Compared to Russian orthography, the choice of individual graphemes is more dependent on larger orthographic units (i.e., sensitivity to orthographic context) even in monosyllabic words. In addition, its syllable boundaries in multisyllabic words are more ambiguous, making accurate encoding of phonological units in both monosyllabic and multisyllabic words a challenging task (Seymour, Aro, & Arskine, 2003).

Data Sources

The student's responses to in-class writing tasks are the main data for this analysis. These writing samples were collected by the teacher in a course of seven months (i.e., from September to April) and sent home for parents' review.

Analysis. The samples were examined based on the inclusion or exclusion of principles of correctness of English orthography using the classification used in the seminal work of Gentry (1982). Spelling refers to the accurate encoding of words; the term accurate is defined based on each language's linguistic and graphophonemic system. In the case of English, the analysis by Gentry (1982), who built on Read's study (1971), suggests five developmental stages. Figure 1 shows these stages of spelling development. The first three stages enumerated by Gentry correspond to the "Words their Way" stages of spelling development (Bear, Invernizzi, Templeton, & Johnston, 2008), (see Figure 1). The "Words their Way" stages are Emergent, Letter Name Alphabetic, Within Word Pattern, Syllable Juncture and Derivational Relations. In this analysis we examined Vikka's spelling and commented using the guidelines of spelling stages.

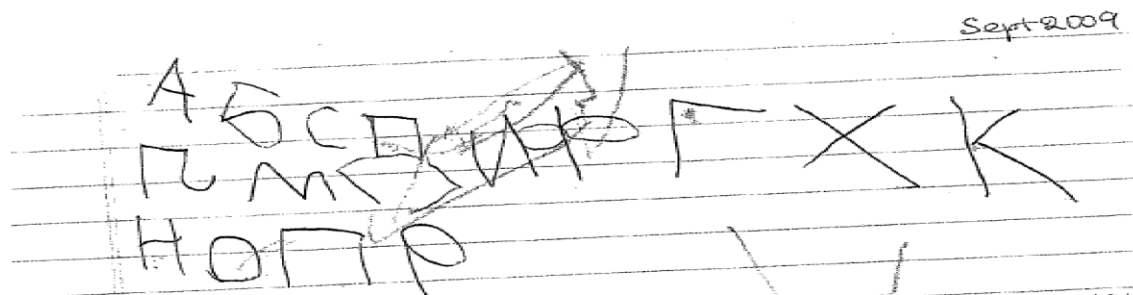
Figure 1. Stages of spelling development (Gentry, 1982; Bear, et al., 2008)



The student's one sentence responses and compositions (i.e., connected texts) were analyzed for writing focus (e.g., does a piece contain a "big idea" and consistently pertains to the same topic?), writing organization (e.g., does a text adhere to a particular genre?) and spelling accuracy (e.g., what stage of orthographic development best describes orthographic patterns found in the student's spelling?).

A look at Vikka's spelling. Early in her school work, Vikka showed evidence of the transfer of knowledge between Russian and English. When asked to write the English alphabet, Vikka would say her ABCs in English. Figure 2 indicates that she utilized her phonemic knowledge of the English alphabet to represent letter sounds with Cyrillic letters used in the Russian alphabet. Specifically, the fourth letter in the first line is the letter *Д* of the Russian alphabet that makes the sound /d/, and Vikka used this Russian character for the English letter *D*. Similarly, the sixth letter on the first line is the letter *Ф*, corresponding to the sound /f/, which she used to represent the English letter *F*. She used a Cyrillic letter *Р*, pronounced in Russian as /r/, to represent the English letter *R*. Although not an actual writing sample, this indicates that the student did not begin English spelling from the Pre-Communicative or Emergent stage (Gentry, 1982; Bear, Invernizzi, Templeton & Johnston, 2008), and that she had already developed an understanding that letters are symbols that represent sounds. Therefore, Vikka was able to accurately record the ABCs in sequence, using Cyrillic letters instead of the ones of the English alphabet.

Figure 2. Alphabet writing in September

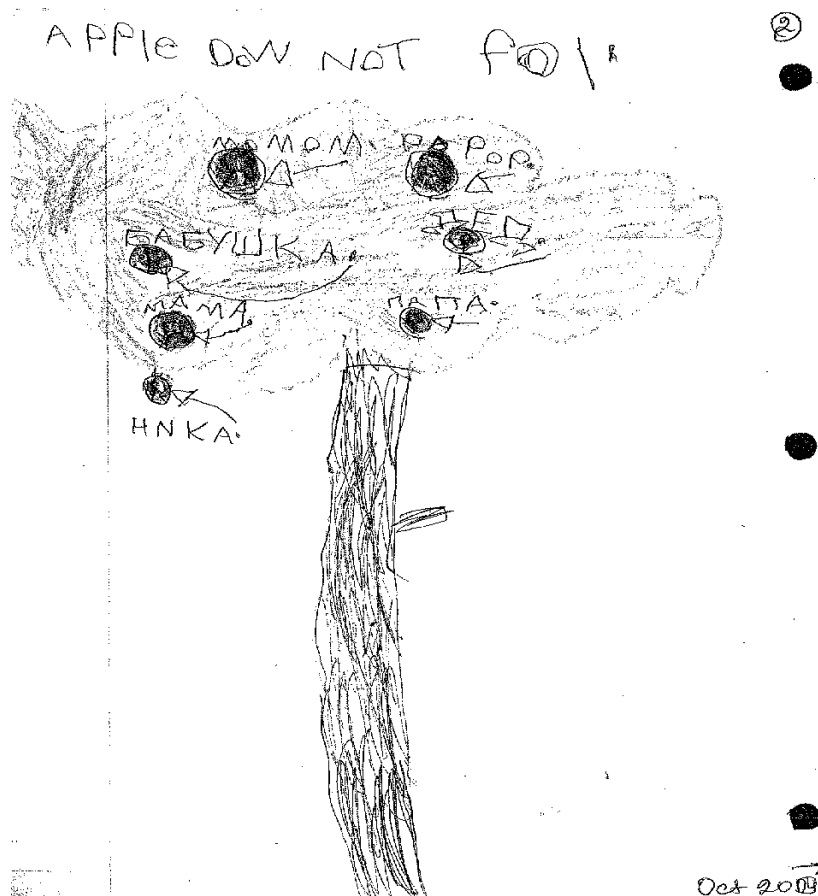


Within a month, Vikka began to only use English letters to represent the sounds in English words, and she began to differentiate the application of the Cyrillic alphabet. Figure 3 shows her writing and spelling after a month of schooling (October). Even though syntax was still developing, this sample indicates that within a month, Vikka was able to make explicit connections between letters and sounds and appears to understand when to use what type of letters. In response to the in-class discussion about families and communities and the teacher's invitation to label family members, the student wrote the title "*Apple Dow Not Fol*" in English and proceeded to represent her family tree. Interestingly, she differentiated the language system used based on the origin of the family members: she wrote the names of her family members in Russia in the Russian language, but she used English to record the names of relatives living in the United States.

By November of the school year, she represented all the letters of the alphabet and produced a coherent message as Figure 4 shows. She accurately wrote all the letters of the

English Alphabet, both uppercase and lowercase, and proceeded to record the ABC song. In the line “*now I lond my ABC’s next time wonte you sing with me*” she has

Figure 3. Family Tree



correctly spelled several words. At this point in the school year, Vikka used but confused the use of the apostrophe. She had not yet mastered contractions or r-controlled vowels (*lond* for “learned”). She understood that *I* needed to be capitalized, but she did not consistently capitalize letters at the beginning of sentences. Vikka seemed to have a good understanding of high-frequency words and directionality. Although previously she had demonstrated her understanding that sentences end with a period, she chose to conclude her sentence with a heart instead.

By December, when asked to free-write in class, Vikka communicated a clear message to the reader (see Figure 5) that reflected her understanding of a temporal sequence: “*We will go to the restaurant after our chores.*” Vikka did not use the uppercase at the beginning of her sentence, but she had a period at the end. Also, the words were appropriately spaced and she attempted to keep them in a linear form, even if she did not use a lined paper. The word *restaurant*, which is a multisyllabic word, is easy for the reader to decipher even though its spelling is invented.

Figure 4. Alphabet Song

Nov 2009

A B C D E F G H I J
 K L M N O P Q
 R S T U V
 W X Y Z Now I
 love my ABCS next
 time want you singing
 with me

She is using but confusing the spelling of the word “chores” and seems to use but confuse r-controlled vowels (*aftar* for “after” and *or* for “our”). In her message Vikka communicates her intention and her plans for the day.

Figure 5. Restaurant

we will go to the rest Chrar
 + aftar or chors.

The participant’s messages in January were longer and demonstrated her ability to present more than one idea. Her writing (see Figure 6) in response to the prompt “Friendship” was focused on one topic and all her sentences related to it: *I have a big dinosaur that is named Alexis that has seventeen friends and she likes to play and I love her very very much.* Vikka seemed to use but confuse words with final *e* (VC-*e*) and overgeneralized the use of the apostrophe (*Ha’s*, *fren’s*, *Like’s*). Further, she used but confused the r-controlled vowels (*Har*,

varree) and she was starting to attempt to use inflected endings (e.g., *naymd*). Compared to her previous samples, the writing is longer. Even though she was manipulating more complex ideas, words, and syntactic demands, the student did not omit words and composed a message that was syntactically coherent. Capitalization, on the other hand, continued to be challenging for the student.

Figure 6. Alexis

Hav a big dindas
that is naymd
Alexis that Har's
Seventeen fren's
and she like's to
play and I luve
Har varree varree much.

Jan. 25, 2010

By February (see Figure 7) Vikka produced a lengthier piece in response to “I am” and “I like” sentence starters: *I am thinking about dinosaurs eating people. I like to run. I like to make silly faces. I am sitting. I am staring.* She had learned how to spell the word “dinosaur” since it was a topic she enjoyed reading about at the time, and her fascination with them was reflected in her writing. She correctly used the *-ing* suffix; however, she had not captured the doubling principle, yet. The student represented plural (*faceis*) phonetically and also used but confused vowel teams (*eeting*, *pepl*). Focus was not present in that sample. Even though her first sentence began with the message about dinosaurs, the rest of the sentences did not connect with the topic.

Figure 7. Dinosaurs Eating People

I am thinking about
dinosaurs eeting pepl. I like to
run. I like to make silly
faceis. I am sitting.
I am staring.

By April, Vikka produced texts that would satisfy the writing purposes of the Common Core State Standards for Kindergarten (CCSS, 2010). She successfully composed informative/explanatory texts, opinion pieces and narratives with several events in a logical

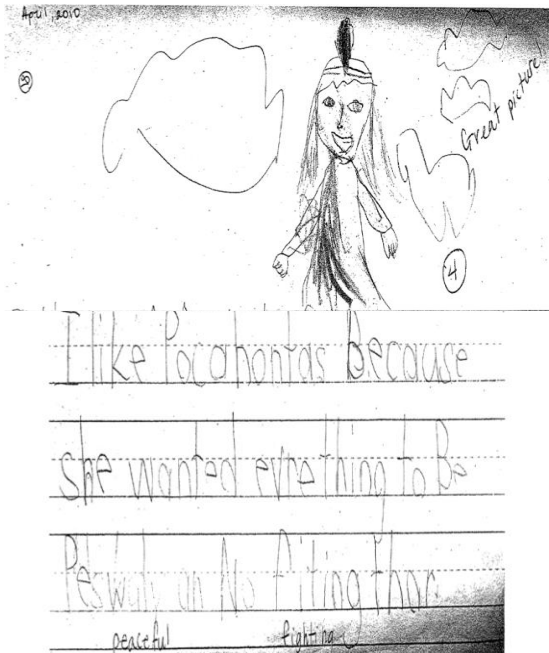
order. Her work indicates an increase in her ability to logically and sequentially present ideas (see Figure 8) and support her thoughts and opinion (see Figure 9). Her composing and exploration of different genres persists in both languages.

Figure 8. Story Sample: Eliza's Birthday

Eleza's Birthday is
 coming up. So Mom! Let's
 get a Dinosaur.
 Eleza opened the
 present after lunch.
 Eleza saw a card
 when she touched it
 the Dinosaur turned real.
 Eleza and the
 Dinosaur lived HAPPY
 the end!!!

Eleza's birthday is coming soon. Mom! Let's get a dinosaur! Eleza opened the present after lunch Eleza saw a card when she touched it the dinosaur turned real. Eleza and the Dinosaur lived happy the end!!!

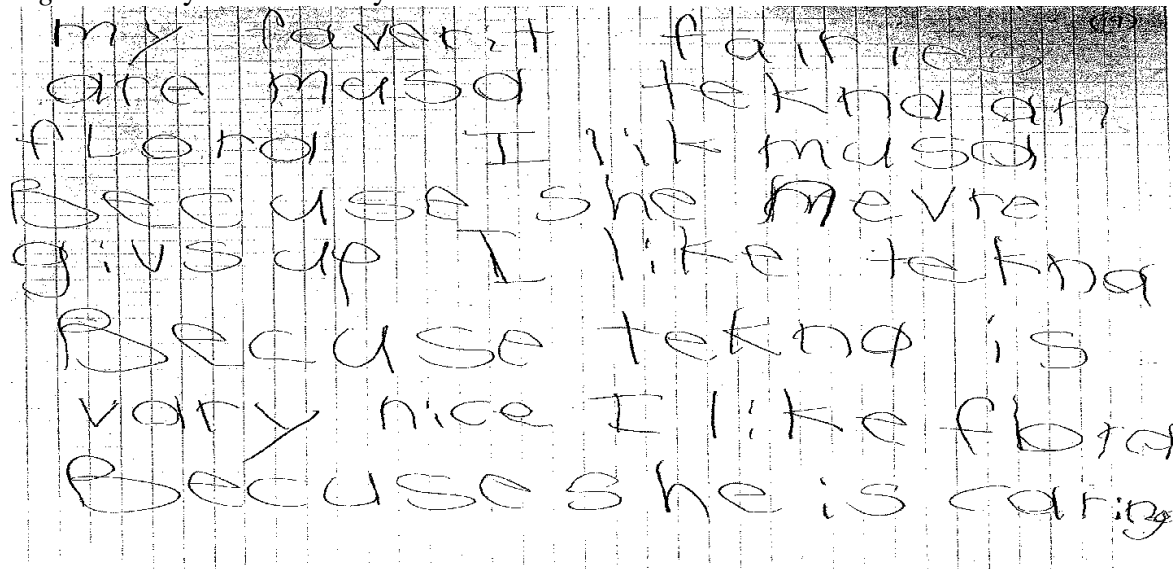
Figure 9. Persuasive Sample: Pocahontas



I like Pocahontas because she wanted everything to be peaceful and no fighting war.

In response to the teacher's prompt to write a story with three sequential events, Vikka wrote, *My favorite fairies are musa tekna and flora I like musa because she never gives up. I like tekna because tekna is very nice I like flora because she is caring* (Figure 10). The analysis of Vikka's composition skills is consistent with research on bilingual students that indicates an advantage of a bilingual learner's working memory in writing over a typical monolingual learner's (Abu-Rabia & Siegel, 2002; Ransdell, Arecco, & Levy, 2001). Vikka did not omit words in this lengthy composition, had no fragmented sentences, and her message was fully-developed and logical. In that sample, the student's thoughts were complete and her statements were followed by an explanation with the use of the conjunction *because*. However, with stronger composition skills, Vikka's spelling appeared to digress and she was still inconsistent in the use of VC-e pattern (*lik*, and *givs*). In terms of conventions, she did not use capitals to indicate the beginning of a sentence or proper nouns, and also omitted several periods at the end of sentences.

Figure 10. My Favorite Fairy



At home, Vikka wrote the same story in Russian when prompted by her mother (Figure 11): *Мои любимые феи муза тэкта и флора муза мне нравится потому что она не сдается мне нравится тэчна потому что она добрая мне нравится флора потому что она заботливая*. Comparative analysis of the two compositions yields an interesting insight into the literacy development of this bilingual learner. Vikka followed directionality rules moving from top to bottom and from left to right and her words are properly spaced in both documents. However, Vikka's orthographic and composition skills in the two languages did not follow a linear progression. The student's newly acquired understanding of English orthography had begun to negatively impact the consistent representation of Russian graphemes and the use of conventions. Vikka used two Russian letters *ya* to represent a Russian diphthong *я* /ya/ in the word *любимая* /lyubimaya/, while representing the diphthong *ю* /yu/ correctly and representing *я* accurately in the same phonetic position in the word *заботливая* /zabotlivaya/. English had influenced her letter formation in Russian as evidenced by her writing the Russian letter *И* as the

This analysis indicates that after seven months of formal literacy instruction, Vikka's new knowledge of English orthography influenced her Russian spelling in a very similar way to that which Russian had affected her English spelling at the beginning of the year. However, whereas her learning transferred from Russian orthography to English orthography gave her a "jump start" in acquiring the new orthographic system, the transfer of knowledge from English to Russian in the absence of formal instruction in Russian orthography could be characterized, for the most part, as negative.

МАМЫ ИЗОБНАМА
 РЕН МУЗА ТЭНА
 ВПЛОРА МУЗА
 МНЕ ПРАВЕЦА ПОТОМУ
 ШТО ОНА НЕ ЗНАЕТ
 МНЕ ПРАВЕЦА ВАМ
 ПОТОМУ ШТО ТЭНА
 БРВІЯ МНЕ ПРАВИ
 ЗА ПЛОРА ПОТОМУ ШТО
 ОНА ЗАБОТЦЕНВАЯ.

Vikka's composition skills in English undoubtedly advanced her writing in Russian; however, her spelling development in Russian was compromised by her progress in English. An examination of the writing samples across time suggests an increase in length and complexity of ideas, as well as an increased understanding about text structure. Her writing also indicates a cross-linguistic transfer in the use of conventions, such as spacing and punctuation. However, Vikka's representation of phoneme-grapheme correspondences in Russian regressed from lack of formal instruction, and as research on bilingual children's early literacy skills indicates, from lack of rich exposure to phonemic awareness practices in the non-dominant language (Bialystok, Luk, & Kwan, 2005).

Implications and Discussion

The purpose of this paper was to examine the role of bilingualism through the analysis of a young, bilingual learner's spelling and writing development. Overall, Vikka's writing and orthographic development through her kindergarten year is a story of success. Although the school did not participate in the Common Core State Standards initiative at the time, by the end of the year she met all of the expectations outlined in CCSS for Kindergarten Language and Writing (CCSS.ELA-Literacy.L.K.1-2; [CCSS.ELA-Literacy.W.K.1-3](#)). Her literacy in another language most like enhanced her ability to make connections with the language system of the new context. After all, it is suggested that biliterate students who enter the monolingual environment of an average public school in the U.S. have an advantage of knowing a lot about the functions of written language that they can transfer to L2 literacy (Schecter & Bayley, 2002). In the act of composing, they also enjoy access to diverse funds of knowledge through two languages and cultures (Freeman & Freeman, 2001).

Instructional Approaches That Can Help Us Support Biliterate Students

These research findings have strong classroom implications. Although it may not be feasible to interact with every child in their own language to support successful literacy development, there is a compelling need for literacy professionals to build a supportive environment that promotes a child's diverse linguistic background as a gift for successful literacy development.

Several instructional approaches could be employed to support the literacy growth of biliterate students in a monolingual classroom. Specifically, building strong school-to-home connections prove to be effective (Shagoury, 2009). Bilingual aides or English-speaking family members can be actively involved and talk with the children about their written work in their home language and allow them to share stories that they cannot yet tell in English. Writing in L1 with the inclusion of pictures can be a great conversation starter that allows a bilingual adult to engage children in shared (i.e., recording children's ideas and demonstrating how writing in English works) and interactive writing (i.e., taking turns in building a written message in English, working both on composition and orthography). See the Appendix for helpful websites for recruiting bilingual volunteers and establishing bilingual communication in a multilingual classroom.

The availability and active use of fairy tales that are shared cross-culturally (e.g., *Jack and the Beanstalk*, *The Boy Who Cried Wolf*) provide a context for the positive transfer between literacies (Bauer & Arazi, 2011). Many fairy-tales can be accessed on *Unite for Literacy* and *TumbleBooks* websites (Appendix). English Language Learners who are familiar with the characters and sequence of events of the fairy tale already have a considerable amount of knowledge about the story grammar that can be used to accelerate their writing and orthographic development in L2.

Further, a teacher could help students build their own contextualized bilingual dictionary of words and expressions through discussion of pictures in cross-cultural or multilingual stories. These newly acquired words could be used to create single-sentence responses to a story through an interactive approach. Students could be encouraged to write those responses in their heritage language and then work with the teacher to capture what the child is trying to share in an English sentence. The activity can gradually be expanded into summary writing using simple language frames to build on the student's knowledge of story grammar. The same instructional sequence

can be applied as a response to structurally simple informational texts, such as life-cycles (Matera & Gerber, 2008).

Interactive journals are another opportunity for biliterate children to work on their writing skills in both languages. This can be done via the development of interaction and a communicative relationship with the teacher (Perrota, 1994). Communicating about everyday activities or events in school through daily journal writing gives children the opportunity to combine the use of drawings, native language, and English writing to experiment and express ideas. Further, this type of interaction provides teachable moments and modeling opportunities on the use of conventional writing. Similarly, a writer's workshop that emphasizes a process approach to writing with opportunities for teacher-student and peer interaction about content allows a biliterate child to build vocabulary and develop knowledge of text structures that can be transferred between languages (Tuyay, 1999). *Culturally Authentic Pictorial Lexicon* and *Google Translate* online tools (Appendix) can be utilized to facilitate the aforementioned instructional routines.

English learners face a number of constraints when composing in their new language (Booth-Olson, Scarcella, & Matuchniak, 2013; 2015). Those constraints can be cognitive (Short & Fitzsimmons, 2007), linguistic (e.g., use of academic language), communicative (e.g., audience awareness and engagement), contextual constraints (e.g., culture-specific context), textual (e.g., textual demands that are genre-specific) and affective (e.g., motivation to write) (Biancarosa & Snow, 2006). Considering all the challenges, the use of writing instruction based on explicit teacher modeling and gradual release of responsibility may be necessary for English learners to develop an understanding and a better sense of writing in their new language. Strategy instruction in writing is an approach that is based on explicit teaching of procedures to scaffold learners' writing competence and affect their motivation (Graham, 2006). For example, students may be taught a story-grammar strategy and the elements of a story for planning, writing, and illustrating their stories.

Home-to-School Collaboration That Can Help Us Support Biliterate Students

Parental involvement is essential in both assisting biliterate students' writing and orthographic development and also building their self-confidence to continue to read and write in both languages (Haneda, 2009). *The Alliance for the Advancement of Heritage Language* database contains helpful resources for encouraging parental involvement in education of biliterate students (Appendix). This online database contains numerous community, university and K-12 school heritage language program profiles to facilitate the exchange of resources and ideas among heritage language schools across the United States. Parents who reside in areas that provide no or a limited access to heritage language resources can find a private, public or a community based school that specializes in promoting biliteracy and bilingualism in a particular language to connect children who share the same linguistic background by skype and email. The database also provides the opportunity to learn from other parents about most effective ways to support biliteracy at home and in the classroom and share teaching resources. *Everything ESL* is another useful website that provides information on starting a bilingual parent volunteer program to support students' biliterate development (Appendix).

Conducting case studies of a bilingual learner's writing development or simply keeping a portfolio of a child's writing samples in both languages can be a motivating factor for bilingual students and their parents (Freeman & Freeman, 2001). Teacher-parent conferences provide an opportunity to present a portfolio to parents, get their insight into the heritage language

influence, and invite parents to be meaningfully involved in their child's literacy experiences at school and at home. Any information the teacher elicits from parents about their own literacy practices at home and their ways to develop and maintain their child's home language reading and writing is helpful in understanding what children bring to their literacy experiences in the second language. Understanding what the children write in school allows parents to also support students in generating ideas for future writing and writing together on related topics or in same genres in their heritage language. Most importantly, parents need to see the importance of continuing to read to their children in L1 and sharing stories from their heritage culture, as this rich cultural information becomes an invaluable source for content generation in writing. Encouraging L1 literacy has the potential to instill a sense of pride and accomplishment in parents who have to put considerable effort and time in building their child's literacy skills and ultimately facilitates a child's well-rounded literacy and social development. Therefore, a home-school connection should be encouraged.

Limitations and Future Research

This paper calls educators' attention to literacy knowledge that young biliterate students such as Vikka bring to classroom and provides suggestions for instruction and home-to-school connection. Additional research could examine the benefits of such collaborations on students' learning across subject areas and age groups. This is a case study and it does not allow generalizations. Future studies could examine early biliteracy development of a larger number of participants and potentially compare findings between the participants with biliteracy in alphabetic and non-alphabetic languages.

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Appendix Online Resources

There are a number of ways to support the reading, writing and spelling of biliterate children in a multilingual classroom, while emphasizing the value of continual literacy growth in their home language. Below we listed online resources that can be used with bilingual and biliterate learners with various linguistic backgrounds.

- *Everything ESL*: This site not only allows teachers to look at different websites, books, and other resources for use with bilingual children, but also contains articles that offer practical advice on supporting bilingual and biliterate children, such as on how to start a bilingual parent volunteer program.
<http://www.everythingsl.net><http://www.everythingsl.net/http://www.everythingsl.net/>
- *The Literacy Center Education Network*: Free practice work sheets that assist children in both reading and writing in multiple languages are accessible on this site. The center also provides information on the latest research about meeting Common Core requirements for educating bilingual learners.
<http://www.literacycenter.net><http://www.literacycenter.net/http://www.literacycenter.net>
- *Culturally Authentic Pictorial Lexicon*: This website offers images demonstrating meanings of words and concepts (including cultural notions) in English and many other languages, making it easier for teachers to understand the cultural context of students' writing and assist students with translation of key words in writing prompts.
<http://capl.washjeff.edu/index.php><http://capl.washjeff.edu/index.phphttp://capl.washjeff.edu/index.php>
- *Google Translate*: There are many uses for this online tool, such as making and sending notes home to non-English speaking parents to seek their support with the student's biliterate development. It could be used in a classroom to encourage biliterate learners to verify the translation of their home language writing to English and then recreate the piece in English using their own knowledge of the English vocabulary and spelling.
<https://translate.google.com/><https://translate.google.com/https://translate.google.com/>
- *Unite for Literacy*: This site provides biliterate students an opportunity to work with dual-language stories from a multilingual online library for young learners. Teachers can use this resource to build story grammar knowledge and cross-linguistic transfer skills through literature analysis.
<http://www.uniteforliteracy.com><http://www.uniteforliteracy.com/http://www.uniteforliteracy.com/>
- *TumbleBooks*: This collection includes animated talking picture books, chapter books, non-fiction titles and graphic novels in English, French and Spanish. This collection is rich in educational resources such as lesson plans, quizzes, educational

games and puzzles related to language skills. This site is accessible by subscription or from a local NYS library website.

[http://www.tumblebooklibrary.com/Default.aspx?ReturnUrl=%2fhttp://www.tumblebooklibrary.com/Default.aspx?ReturnUrl=/http://www.tumblebooklibrary.com/Default.aspx?ReturnU](http://www.tumblebooklibrary.com/Default.aspx?ReturnUrl=%2fhttp://www.tumblebooklibrary.com/Default.aspx?ReturnUrl=/http://www.tumblebooklibrary.com/Default.aspx?ReturnUrl=/)
[rl=/](http://www.tumblebooklibrary.com/Default.aspx?ReturnUrl=/)

- The Alliance for the Advancement of Heritage Language database was built to facilitate the exchange of resources and ideas among heritage language schools across the United States. Teachers can use the search function to find a private or public school or a community based school near you that specializes in promoting biliteracy and bilingualism in a particular language to connect students via Skype and share teaching resources. www.cal.org/heritage<http://www.cal.org/heritage><http://www.cal.org/heritage>